September & October | 2013

ACDelco TechConnect

All-New 2014 Chevrolet Silverado 1500 and GMC Sierra 1500 Have Arrived

The all-new 2014 Chevrolet Silverado 1500 and GMC Sierra 1500 arrive first as a crew cab, followed soon by a regular cab and a double cab, which replaces the extended cab of previous years. Early buyers can choose from either a 4.3L V6 engine or a 5.3L V8 engine. A new 6.2L V8 engine will follow later in the year.

For the first time, 1500 crew cabs will be available with a longer 6'6" cargo box, in addition to the previous 5'8" cargo box, enabling customers to carry more cargo while still being able to park in many garages.

New EcoTec3 Engines

Three all-new EcoTec3 engines will be offered. The EcoTec3 engines feature three state-of-the-art technologies — direct injection, V4 Active Fuel Management (cylinder deactivation) and continuously variable valve timing — to make the most of power, torque and efficiency across a broad range of operating conditions.

continued on page 2

Full-Size Truck Brake Pipe Kit

ACDelco recently released new hydraulic brake pipe kits for 1999-2007 Chevrolet Silverados and GMC Sierras and 1999-2006 Cadillac Escalade, Chevrolet Tahoe, Chevrolet Suburban, Chevrolet Avalanche and GMC Yukon models. These kits can be used any time the replacement of the entire brake pipe assembly is required.

All kits are pre-formed and pre-flared to aid installation. The brake pipe kits have a nylon coating that provides better corrosion protection; and they are a lower-cost alternative to pipe replacement.

The kits are not intended for the repair of a single damaged brake pipe. They are intended for the replacement of the entire brake pipe assembly due to corrosion or wear.

Service bulletin 13D-079 GMT800 details the procedures for installing these kits. It includes a part number listing for each application.

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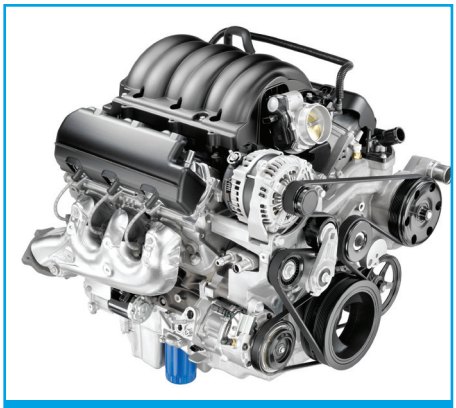
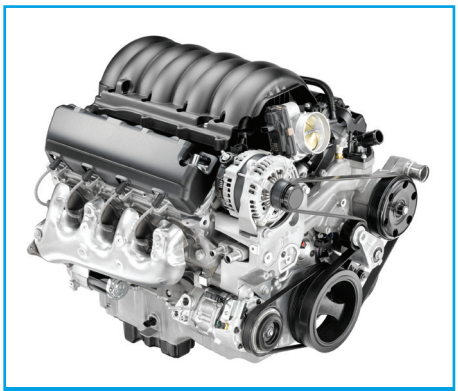


EcoTec3 4.3L V6

The new 4.3L V6 will offer customers a state-of-the art truck engine, SAE-certified at 285 horsepower and 305 lb.-ft. of torque, the most torque of any standard V6. The engine is E85 capable.



EcoTec3 5.3L V8

The new 5.3L V8 is SAE-certified at 355 horsepower and 383 lb.-ft. of torque. With EPA-estimated fuel economy of 23 mpg highway (2WD), it is the best fuel economy of any V8 pickup. It is also E85 capable.

The new 6.2L V8, available later this year, is expected to be the most capable engine offered in any light-duty pickup truck.

Flexible Fuel Sensor

The flexible fuel sensor measures the ethanol-gasoline ratio of the fuel being used in a flexible fuel (E85 capable) engine. Flexible fuel vehicles can be operated with a blend of ethanol and gasoline, up to 85 percent ethanol.

The flexible fuel sensor uses quick-connect style fuel connections, an incoming fuel connection, and an outgoing fuel connection. All fuel passes through the flexible fuel sensor before continuing on to the fuel rail.

The flexible fuel sensor measures two different fuel related parameters, and sends an electrical signal to the Engine Control Module (ECM) to indicate ethanol percentage and fuel temperature. Since the flexible fuel sensor measures the actual percentage of ethanol in the fuel, it is no longer necessary to wait for an empty fuel tank in order to refill with E85.

Active Fuel Management

Cylinder deactivation, also known as Active Fuel Management, is now standard on all three engines. The system uses oil pressure, controlled by the Powertrain Control Module, to deactivate the lifters on selected cylinders, closing the valves for those cylinders. It deactivates four of the cylinders on the V8 engines and two cylinders on the V6 under light load conditions — operating the engines as a V4 — and seamlessly reactivates the cylinders when the driver demands greater power. The transition takes less than 20 milliseconds and is imperceptible.

Advanced Oiling System

The oiling system on the engines incorporates a new variable displacement two-stage vane-type oil pump that enables more efficient oil delivery, based on operating conditions. Its dual-pressure control enables operation at a very efficient oil pressure at lower RPM, and then delivers higher pressure at higher engine speeds.

An oil control solenoid valve, controlled by the ECM, mounted to the oil pump provides two-stage functionality. The oil pump is mounted on the front of the engine block and driven directly by the crankshaft sprocket.

An oil passage at camshaft bearing location permits oil flow into the center of the camshaft. Oil enters the camshaft, exiting at the front and into the camshaft position (CMP) actuator solenoid valve. The CMP valve spool position is controlled by the ECM and CMP magnet. When commanded by the ECM, the CMP magnet repositions the CMP actuator solenoid valve spool directing pressurized oil into the CMP actuator to control valve timing.

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ACDelco 360 represents our mission to look at our businesses at every possible angle to provide value and assistance to our distributors and their customers as well as offer a full circle of support with programs, tools, training and marketing focused on enhancing and growing our partnership successfully.

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ACDelco service tips are intended for use by professional technicians, not a "do-it-yourselfer." They are written to inform those technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions and know-how to do a job properly and safely. If a condition is described, it cannot be assumed that the information applies to all vehicles or that all vehicles will have that condition.

All materials and programs described in this magazine are subject to change. Submission of materials implies the right to edit and publish. Inclusion in the publication is not necessarily an endorsement of the individual or the company.

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Chevrolet Silverado 1500 and GMC Sierra 1500 –

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Oil pressure gauge needle oscillation will occur due to the two-stage oil pump self-test. The ECM will perform a functionality test of the two-stage oil pump after a cold soak, when the engine is first started and the vehicle is driven.

This functionality test will occur three times in a short time span and can be observed on the oil pressure gauge as a brief increase (spike) in the oil pressure gauge needle. Additionally, at 3,500 RPM or greater, the two-stage oil pump switches over to high stage and the oil pressure gauge needle will move to the high position.

New Fluids

Engine oils meeting the requirements of the vehicle will have the dexos 1 certification mark on the container.

SAE 5W-30 is the required viscosity grade for the 4.3L engine and SAE 0W-20 is the required viscosity grade for the 5.3L and 6.2L engines.

New synthetic axle gear oil is used on the 2014 Silverado and Sierra. The new synthetic axle gear oil is a 75W85 viscosity. In the United States, use GM P/N 19300457. In Canada, use GM P/N 19300458

A new brake fluid also is used for 2014 that has enhanced corrosion inhibitors and significant improvements in lubricity that are engineered to eliminate master cylinder squeak/noise.

In the U.S., use brake fluid with GM P/N 19299818. In Canada, use GM P/N 19299819.

Enhanced Ride and Handling

The 2014 trucks feature a revised front and rear suspension and wider wheels that provide a more comfortable ride and more confident handling. Electric power steering improves steering feel and reduces fuel consumption. New four-wheel-disc brakes with Duralife™ rotors improve brake feel and potentially double rotor life.

The Silverado 1500 and Sierra 1500 will be available with segment-exclusive safety features such as Forward Collision Alert, Lane Departure Warning with an Active Safety Seat, and Front and Rear Park Assist. StabiliTrak with Trailer Sway Control and Hill Start Assist are standard on all models.

Electric Power Steering System

The belt-driven electric power steering system features an integrated electromechanical power steering unit, containing the power steering control module, its sensors, the power steering motor, a belt drive and a ball nut mechanism.

The power steering control module has a software feature referred to as Smooth Road Shake Compensation that reduces steering wheel vibration caused by an imbalance from the front tire/wheel assemblies. The vibration transmitted to the steering wheel is referred to as Smooth Road Shake and is a phenomenon that occurs only at highway speeds and on smooth roads.

In addition to smooth road shake, road crown is compensated for by the steering wheel angle sensor signal, which calculates the intended driving direction. The Electronic Brake Control Module (EBCM) receives serial data message inputs from the steering wheel angle sensor.

The steering wheel angle sensor does not require centering often. However, if the steering wheel angle sensor is not correctly centered it may create a lead/pull condition. If this condition is encountered, always perform the Steering Angle Sensor Centering procedure before performing a wheel alignment.

Stronger, Quieter Cab

The new truck cab is functional, yet refined.

The new truck cab is stronger, with nearly two-thirds of the structure made from high-strength steel.

New shear-style body mounts tune out both up-and-down and side-to-side movement for a quieter, more comfortable ride. Double cab and crew cab models have a set of hydraulic rear body mounts to further isolate the cabs.

Rear doors on crew cabs are larger, for easier entry and exit, and rear doors on double cab models are now hinged at the front for easier access, especially in tight spots.

– Thanks to Peter Joslyn and Sherman Dixon

Full-Size Truck Brake Pipe Kit –

continued from page 1

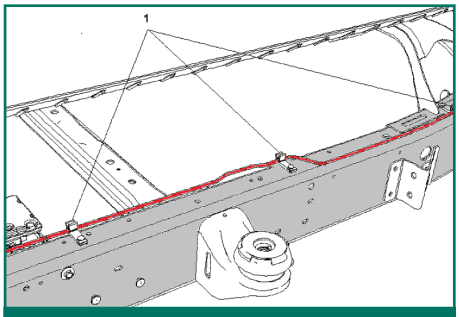
When removing the old brake pipes, be sure to clean all dirt, rust or other contaminants from the areas adjacent to each brake pipe tube nut so that no contaminants enter any hydraulic fittings or openings of the brake pipes.

Also carefully remove the existing brake pipes from the routing clips to avoid damaging the clips. The new brake pipes will be installed into the existing clips.

Before installation, be sure to identify the correct port locations on the master cylinder, Brake Pressure Modulator Valve, and brake pressure proportioning valve, where equipped, to ensure proper operation.

Once the new brake pipes are installed, inspect the routing of the new pipes to ensure that the pipes do not contact any part of the frame, body or any chassis components.

– Thanks to Vincent House



The replacement pipes are designed to fit each vehicle application.

Grade Braking Operation on GM Full-Size Trucks

Grade Braking on GM full-size trucks has evolved over the past several years to have broader application and increased authority. Available on 2007-2014 Cadillac Escalade; Chevrolet Avalanche, Silverado, Suburban, Tahoe, Express; and GMC Sierra, Yukon and Savana models, Grade Braking assists in maintaining vehicle speed when driving on a downhill grade by automatically implementing a shift schedule that uses the engine and transmission to slow the vehicle. This feature is internal to the vehicle's software/calibration and requires no driver action to activate.

Refer to Bulletin #08-07-30-030A and #PIT5202 for additional information on various operating features — including Grade Braking — of automatic transmissions 6L80 (RPO MYC) and 6L90 (RPO MYD) used on these full-size trucks, SUVs and vans.

The operation of Grade Braking varies on many models. Here are the Grade Braking differences, explained by model year.

2007-2012 MODEL YEARS – Powertrain Grade Braking

Powertrain Grade Braking has been available since 2009 on GM light-duty models and 2007 on GM heavy-duty models. The Tow/Haul Mode has to be selected.

Tow/Haul Mode button on the shift lever.

Automatic downshifting (known as Normal – Powertrain Braking) to assist speed control will activate when Tow/Haul mode is active and the brake pedal is depressed (even lightly). Downshifts are commanded at higher speeds than normal resulting in engine braking that assists with speed control. After a powertrain braking situation ends, upshifts will typically be commanded when the accelerator pedal is pushed down (a quick increase in accelerator pedal position may be required).

2009-2012 MODEL YEARS – Cruise Grade Braking

For the 2009-2011 model years, Cruise Grade Braking on GM full-size trucks is effective only in Tow/Haul Mode when cruise control is engaged.

For the 2012-2013 model years, Cruise Grade Braking is effective in both Tow/Haul Mode and Normal Mode when cruise control is engaged. Cruise Grade Braking is not available in Range Selection Mode.

Cruise Grade Braking provides automatic transmission downshifting to assist in speed control when vehicle speed has increased from the set point by a certain amount. Multiple downshifts may be commanded depending on the amount of deviation of vehicle speed to the set speed. As the vehicle speed slows and approaches the original set speed, transmission upshifts will be commanded to return to a normal operating condition.

At some speeds and on some downhill grades, the transmission may not be able to command a gear low enough to slow the vehicle to the set point without overspeeding the engine. In this case, the transmission will command all available downshifts, but if further engine braking is desired, the driver must press the brake pedal to slow the vehicle enough so additional downshift(s) can be commanded.

Pressing the brake pedal has the normal effect of cancelling cruise control operation and, in this case, a transition to Normal – Powertrain Braking is completed.

2013 MODEL YEAR – Powertrain Grade Braking

For the 2013 model year, GM full-size trucks continue to have Powertrain Grade Braking when in Tow/Haul Mode as in earlier model years, but now, cruise control does not have to be activated.

The significant change is that these vehicles also now have Powertrain Grade Braking while in Normal mode (Normal mode = Tow/Haul mode OFF).

Normal mode Powertrain Grade Braking assists when driving on a downhill grade to help maintain desired vehicle speed by using the engine and transmission to slow the vehicle.

Normal mode Powertrain Grade Braking defaults to ON after each ignition key cycle. It is not available in Range Selection Mode.

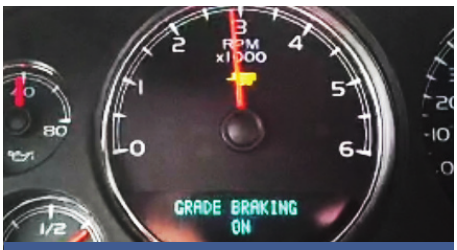
To disable or enable all grade braking within the current ignition key cycle, press and hold the Tow/Haul button for three seconds.

This feature requires the driver to apply steady brake pedal pressure to maintain desired speed while driving on a downhill grade. The vehicle's modules calculate brake temperature and enable Normal mode Powertrain Grade Braking if necessary.

The transmission downshifts and engine RPM increases. At this point, if the brake pedal is released, the transmission will hold the current gear. If additional engine/transmission braking is needed to help maintain desired speed, reapply steady brake pedal pressure and additional downshifts may occur.

Normal mode Powertrain Grade Braking will have a less aggressive transmission downshift schedule than Tow/Haul mode Powertrain Grade Braking.

Grade Braking can be exited by pressing the accelerator pedal.



Normal mode Powertrain Grade Braking in action.

2014 MODEL YEAR – Powertrain Grade Braking

Powertrain Grade Braking for the 2014 model year vehicles operates much the same as in 2013 vehicles.

The 2014 vehicles continue to have Powertrain Grade Braking while in Normal mode.

To disable or enable all grade braking within the current ignition key cycle, press and hold the Tow/Haul button for five seconds. This is a longer button press than previous model years.

GRADE BRAKING ACTIVE displays on the Driver Information Center when the grade braking has been activated while driving on downhill grades. This message will not display if Cruise Control Grade Braking goes active.

– Thanks to Mike Johnston

Solving Programming System Errors

If an error is received during a programming event to update a control module's flash calibration files with newer calibration information, there are several items to check first before resorting to replacing the control module. There may be different occurrences that caused the programming error, and most errors can be resolved by following some basic troubleshooting steps.

Following are several specific GM Service Programming System (SPS) programming errors and how to resolve the issue.

Error E4399/E4403 – Severe Error

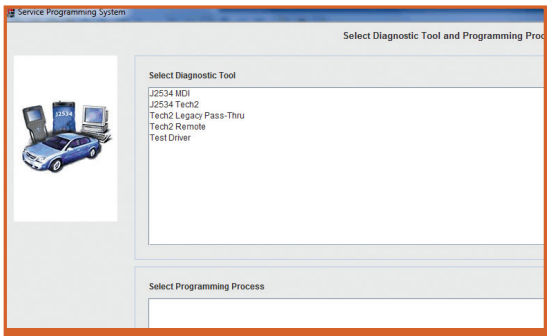
These general programming errors are typically the result of a loss of communication between the programming device and the control module. The loss of communication can be caused by a drop in battery voltage, delay in communication with the module, or a vehicle issue such as interruption on the BUS (wiring, connector issue, aftermarket components, etc.).

Make sure a minimum of 12.5 volts is maintained during programming. Attempt to re-establish communication with the control module using GDS 2 or a Tech 2 scan tool. If communication can be established, reattempt programming using "Replace and Program ECU" as the programming method. If communication cannot be re-established, deplete retained power by disconnecting the negative battery terminal for a minimum of five minutes. Re-establish and maintain battery power, attempt to communicate with the control module using the Multiple Diagnostic Interface (MDI) tool or Tech 2. Reattempt programming using "Replace and Program ECU."

Some pre-2007 GM vehicles may require using the Tech 2 and the "Legacy Tech 2" programming option in SPS in order to use a slower programming communication speed.

Error E4404/E4494 – No Communication with Diagnostic Tool

This is a loss of communication between the programming device (MDI or Tech 2) and the service center PC. It is not a module or vehicle problem.



Check for a loss of communication with the programming device.

Confirm the connection from the PC. If the programming device is connected by USB, select a different USB port on the PC. If using a wireless network for the MDI connection, confirm the wireless connection or switch to a USB connection. Disable the MDI wireless connection in the MDI wireless manager when using a USB connection.

If programming with a Tech 2, perform a Tech 2 self-test, found in SPS under Settings > Diagnostics > Test Connections. Be sure to use a known good Techline PC serial port connector and RS232 cable.

Confirm and maintain proper battery voltage before attempting programming.

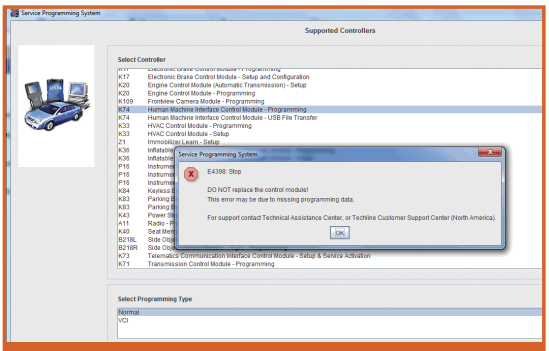
Error E4413/E4414 – Calibrations marked with an (*)

An asterisk (*) indicates that the SPS application is not recognizing the calibrations being read from the control module, which can be caused by a non-GM calibration programmed into the control module or an incomplete SPS data record.

It may be necessary to restart the SPS application and select "Replace and Reprogram" as the programming method. This procedure will overwrite the unidentified software and calibrations.

Error E4398 – No Calibration Data

This error is the result of a missing or incomplete data record. It is not related to the control module being programmed or a vehicle issue. Contact the ACDelco Helpdesk.



No calibration error

Error E4491/E4423 – Programming Failed

These programming errors can occur from different areas. If encountered on a service module, confirm the correct part number is being used and confirm programming is possible by attempting to program the original module.

Any time a programming event is interrupted or unsuccessful, do not turn off the ignition. Check the programming tool connections and that the TIS software is up to date, and then attempt to reprogram the control module.

If a programming error cannot be resolved, do not replace the control module before contacting the ACDelco Helpdesk. For assistance, be sure to have the original and service module part numbers and error detail available.

Access to the GM Service Programming System, GM vehicle calibrations, Tech 2 scan tool diagnostic software updates and GDS 2 software updates are available online through a TIS2Web (Techline Information System) subscription. Go to www.acdelcotecconnect.com and click the GM Service Information link on the left side of the home page for more information.

For assistance with software and programming, contact the ACDelco Helpdesk at 1-888-212-8959.

– Thanks to Bob Stewart

ACDelco NATEF Training Program

The National Automotive Technicians Education Foundation (NATEF) was founded in 1983 as an independent, non-profit organization with the mission of improving the quality of automotive technician training programs nationwide at secondary and post-secondary public and proprietary schools. To accomplish this mission, NATEF examines the structure, resources and quality of training programs and evaluates them against standards established by the industry. These standards reflect the skills that students must master to be successful in the industry. NATEF also works with students to increase career awareness opportunities in the automotive repair industry.

General Motors and ACDelco are strong supporters of future automotive technicians via NATEF certified secondary and post-secondary schools. ACDelco has been working with the NATEF organization to provide a limited number of web-based training courses to capture the attention of younger high school technician prospects.

ACDelco is now expanding their role with the NATEF. ACDelco has developed the ACDelco NATEF Training Program that will be piloted in September and evolve to become a national training program in early 2014.

There are two training paths available to NATEF instructors and their students. Instructors will be given access to over 100 ACDelco web-based training courses and students will be given access to 23 technical and business web-based training courses.

For more information about NATEF, visit www.NATEF.org.

– Thanks to Jill Brown

New Videos on the ACDelco YouTube Channel

ACDelco's YouTube channel includes a number or helpful product information and service videos. These videos can be viewed at youtube.com/user/acdelcoofficialpage.

Some of the latest videos cover a variety of product installation and diagnostic information, including:

- Power Steering Pump Replacement
- Power Steering System Quality Improvements
- Serpentine Belt Replacement and Diagnostics
- Power Steering System Overview
- How to Determine Belt Tensioner Failure
- ABS Replacement
- Intake Manifold Cleaning and Replacement
- Shocks and Struts Replacement
- Worn Tensioner Pulley Replacement
- ACDelco PF46E Oil Filter Replacement
- GM OE Car Ignition Parts

- Installation of Remanufactured Truck Parts
- ACDelco Professional Conventional Spark Plugs
- Rapidfire Performance Spark Plugs
- ACDelco Fuel Pumps
- Inspection Camera and Spark Plug Cylinder Inspection
- Timing Belt Replacement
- ACDelco History and Overview
- GM OE Control Modules
- ACDelco Spark Plug Wire Sets
- ACDelco Ignition Modules
- GM OE Professional Ignition Coils
- Ignition Coil-on-Plugs
- Professional ReadyStruts
- Advantage Auto Batteries

The ACDelco product video pages include links to acdelco.com product pages and the nearest ACDelco Professional Service Centers.

Many of the videos also are available on acdelcotechconnect.com. Click the Product Information tab and then click Technical Product Service Aids.

– Thanks to Rick Balabon

ASE Fall Test Dates

The last 2013 testing session for the ASE tests will be held October 1 – November 30, 2013.

Registration takes place September 1 – November 21, 2013.

Register online at www.myASE.com or by calling ASE testing partner, Prometric, at 1-877-346-9327.

TechTips

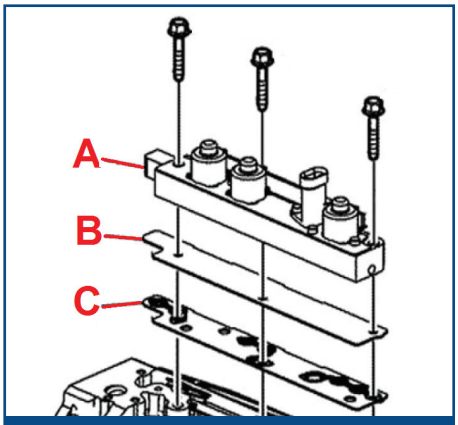
The following technical tips provide repair information about specific conditions on a variety of vehicles. If you have a tough or unusual service repair, the ***Diagnostic Hotline*** *can help. Call* ***1-800-825-5886, prompt #2****, from 8 a.m. to 8 p.m. ET Monday–Friday, to speak with a technical expert with the latest OEM information.*

Conversion to Non-Active Fuel Management Engine

2007-2008 Chevrolet Impala

The Active Fuel Management (AFM) lifter for the 3.9L engine (RPO LZ8 or LZG) is no longer being manufactured. If the camshaft and/or lifters need to be replaced, a conversion kit is available that deactivates the AFM feature. This is an option for customers instead of incurring the cost of a replacement engine.

Deactivation of AFM will reduce the vehicle's fuel economy (the actual impact depends on vehicle speed, load, road conditions, driver behavior and other factors). The engine may also run quieter after conversion.



A. LOMA unit
B. LOMA oil block-off plate
C. LOMA gasket assembly

The conversion kit contains camshaft lifters, a block-off plate for the oil flow to the Lifter Oil Manifold Assembly (LOMA), and necessary seals and gaskets.

The non-AFM lifters and lifter guide are installed into the same lifter bores. The LOMA oil block-off plate is installed between the LOMA gasket assembly and the LOMA unit.

An altered/modified vehicle label also is included with the conversion kit. Install the label on the right passenger-side top of the strut tower.

After installing the engine, disable and tape the 12V supply wire to the LOMA unit. Also reprogram the ECM with the calibration for converting from AFM to non-AFM operation. With the new calibration, the AFM data will read "0," any circuit tests will read "FAULT," and the cylinder mode monitoring will stay in "6 cylinder mode" at all times.

Corrosion Due to Coolant Intrusion

While performing repairs or diagnosis as outlined in the appropriate Service Information, care should be taken to avoid engine coolant entering any disconnected wiring harness connections. Coolant can be very corrosive and cause future connection issues.

If a wiring harness may be potentially exposed to coolant, it may be helpful to place a plastic bag or other enclosure over the harness connectors and secure it with a cable tie strap (zip tie) until the harness is ready to be reconnected. This will help reduce the possibility of coolant entering the harness or connectors.

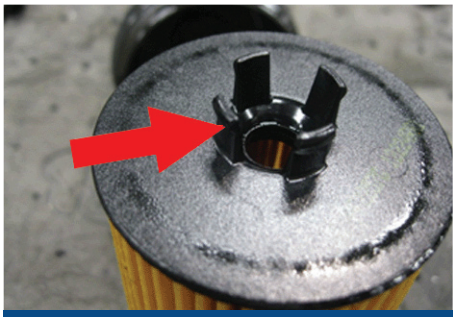
If coolant does enter the electrical connectors, clean the connectors completely with electrical contact cleaner and low pressure compressed air. Apply a light coating of dielectric grease before reconnecting the wiring harness.

Low Oil Pressure Light On at Idle

2013-2014 Buick Encore; 2009-2011 Chevrolet Aveo; 2011-2014 Chevrolet Cruze; 2012-2014 Chevrolet Sonic; 2009-2010 Pontiac G3; 2008-2009 Saturn Astra

The low oil pressure light may illuminate or flash on and off at idle on some models equipped with engine RPOs LUJ, LUV, LUW, LWE, LXV and 2H0. This may be caused by oil pressure being bled off due to debris in the oil drain check valve or a smashed oil filter.

During an oil change, it's possible for the tabs on the oil filter to break off and fall into the filter housing. The debris may become lodged under the oil filter housing drain check valve, causing it to remain open when the new filter is installed. In which case, oil will drain back into the oil pan and reduce the pressure allowed to the engine.



Make sure oil filter tab does not break during installation.

If the oil filter is installed improperly, the filter may be smashed and not be able to close the oil filter drain check valve.

Smashed oil filter

Use a manual pressure gauge to check oil pressure. If pressure is low, remove the oil filter and confirm proper operation of the oil filter drain check valve. If the valve does not seal or is held open, repair as necessary and recheck oil pressure.

Product Information

For free technical assistance and product information regarding specific ACDelco products, contact these toll-free information hotlines staffed by ASE-certified technicians:

Brakes – 1-888-701-6169 (prompt #1)

Chassis – 1-888-701-6169 (prompt #2)

Clutches – 1-888-725-8625

Lift Supports – 1-800-790-5438

Shocks – 1-877-466-7752

Starters and Alternators – 1-800-228-9672

Wiper Blades – 1-800-810-7096

Go to **www.acdelcotechconnect.com** and click the Training tab to log in to the ACDelco Learning Management System (LMS).

New Courses

S-BK05-03.01ILT – Electronic Brake and Chassis Controls: Is the vehicle really smarter than the driver?

This course focuses on the different strategies and components used to control chassis and brake systems. After exploring the operation of various systems and their components, Original Equipment Manufacturer (OEM) supported diagnostic techniques will be examined covering systems such as antilock brakes, tire pressure monitoring, and electronic power steering.

S-DS11-13.01ILT – Vehicle Network Communications: When modules talk, who is really listening?

In this course, the operation of various serial data protocols, and the physical data bus layout used by a number of manufacturers, is reviewed. It covers the operation of various data buses and the associated components. Diagnostic techniques highlight typical serial data bus concerns such as no communication with one, several, or all modules on a vehicle.

S-EL06-16.01ILT– Hybrid Vehicle Service and Safety: Batteries Included

A review of safety equipment and procedures will prepare technicians for on-vehicle exercises in this course. Technicians will identify and locate all GM full-size truck Two-mode Hybrid components on a vehicle and perform high voltage system disabling and enabling procedures.

S-EP08-07.01ILT – Air Induction and Fuel Injection Operation and Diagnosis

The different operational and diagnostic procedures on various vehicle manufacturers' air induction and fuel systems are reviewed in this course. Emphasis is placed on hands-on exercises and case studies to develop various service strategies, reducing time spent under the hood.

Training Schedule

To search for currently scheduled courses in your area, view the Training in Your Area section on the Home page. Select search terms from the dropdown menus and click the Submit button.

Current Instructor-Led Training Courses

The following ILT courses are currently being scheduled:

Course Number	Course Name
S-AC07-02.01ILT	Automotive Air Conditioning Advanced Refrigerant System Diagnostics
S-AC07-03.01ILT	HVAC Control System Operation and Diagnostics
S-AC07-07.01ILT	Chrysler HVAC
S-BK05-01.01ILT	Braking Systems
S-BK05-02.01ILT	ABS Operation and Diagnosis
S-BK05-03.01ILT	Electronic Brake and Chassis Controls: Is the vehicle really smarter than the driver?
S-DS11-13.01ILT	Vehicle Network Communications: When modules talk, who is really listening?
S-EL06-04.02ILT	Network Communication Diagnosis
S-EL06-10.02ILT	Electrical Power Management
S-EL06-11.01ILT	Automotive Electrical Circuit Diagnosis and Repair
S-EL06-11.02ILT	Enhanced Automotive Circuit Diagnosis
S-EL06-12.01ILT	Hybrid Technology and Service
S-EL06-13.01ILT	Body Electrical Global Diagnostics
S-EL06-14.01ILT	Advanced Body Control System Electrical Diagnostics
S-EL06-16.01ILT	Hybrid Vehicle Service and Safety: Batteries Included
S-EP08-02.01ILT	Engine Performance Computer Controls and Ignition System Diagnostics
S-EP08-03.01ILT	Engine Performance Air Induction and Fuel System Diagnostics
S-EP08-04.01ILT	Engine Performance Fault Monitoring and Emission System Diagnostics
S-EP08-05.01ILT	Engine Performance Advanced Drivability Diagnostics
S-EP08-06.01ILT	After Combustion Sensors: Is what is in the exhaust making your engine run rough?
S-EP08-07.01ILT	Air Induction and Fuel Injection Systems
S-EP08-08.01ILT	Evaporative Emissions Controls: Why is there always a code but never a leak we can find?
S-EP08-09.01ILT	Spark Generation: Is a lack of spark sending you up in flames?
S-EP08-21.01ILT	Chrysler Engine Performance
S-EP08-81.02ILT	Duramax Diesel Operation and Diagnosis
S-SS04-01.01ILT	Vibration Correction Diagnostics
S-ST10-01.01ILT	Supplemental Restraint Systems

Current Virtual Classroom Training Courses

The following VCT courses are currently available:

Course Number	Course Name
S-AC07-01.01VCT-R	HVAC System Components and Lubricants
S-AC07-02.01VCT-R	HVAC System Operation and Service Hints
S-AC07-03.01VCT-R	HVAC System Flushing, Recovery and Diagnostics
S-AC07-04.01VCT-R	HVAC System Engine Cooling, Controls and Communication
S-EL06-01.01VCT-R	Electrical Circuit Function and Diagnosis
S-EL06-02.01VCT-R	Testing Electrical Signal and Control Circuits
S-EL06-03.01VCT-R	Serial Data Communication Networks
S-EL06-04.01VCT-R	Communication Network Diagnosis
S-EM01-01.01VCT-R	Camshaft Position Actuator Systems
S-EM01-02.01VCT-R	Active Fuel Management Operation
S-EM01-03.01VCT-R	Active Fuel Management Diagnosis
S-EP08-03.01VCT-R	6.6L Duramax LGH and LML Diesel Engines

– Thanks to Greg St. Aubin